

## ■ 3.0 Project Work Plan

### 3.1 Introduction

This section presents the CS team's approach to conducting the work plan for the Williams Gateway Corridor Definition Study. We propose to complete the Draft Report in an 11-month period and the Final Report at the end of a 14-month period (by the end of November 2005). Our approach is designed to provide ADOT with a rigorous technical process and a meaningful and interactive public and stakeholder involvement process. To this end, we will implement a detailed public and stakeholder involvement plan at the beginning of the study to define the corridor and to build consensus about the type of transportation options viable for the corridor. The outcome of this interactive process will be a clearly defined and realistic corridor project option recommendation for Williams Gateway.

Our approach to conducting this work plan focuses on providing a fresh look at potentially viable transportation options for this corridor. We will take advantage of our teams existing corridor knowledge, processes, and techniques from our team members' work on the ADOT MoveAZ Plan, the Pinal County Transportation Plan, the Williams Reuse Plan Update, the Williams Regional Planning Study, and the Williams Campus Master Plan. We will supplement this knowledge with available information and data from the Southeast Maricopa/Northern Pinal County Area Transportation Study (SEMNPTS) and other sources to build the analytical process for this study.

Our approach will enable ADOT to use the existing and future conditions results, needs and deficiencies analysis, evaluation and financial analysis of future project options, resulting data, and recommended options generated in this study as input into the next state transportation planning process. We will build on the momentum of the MoveAZ Plan and the SR 179 Corridor Development Study in Sedona to ensure that ADOT will continue to seek and use public and stakeholder input to help build project solutions.

The study's work plan presented in Section 3.2 follows the plan identified in the RFP with a few exceptions. These include combining the two rounds of public and stakeholder involvement into a single task and preparing the Draft and Final Reports in one combined task. Section 3.3 summarizes the anticipated products by task to be prepared for the study and Section 3.4 presents our proposed study work time schedule. Section 3.5 presents the progress reporting procedures that keep ADOT and the TAC abreast of the study's status and Section 3.6 describes the cooperative features associated with our work plan.

### 3.2 Work Plan

#### Task 1. Refine Work Plan and Corridor Boundary Definition

##### *Objective*

Refine the work plan, schedule, budget, and corridor boundary definition through detailed and facilitated discussions and meetings with ADOT and the TAC.

## Approach

The CS team will refine the Williams Gateway Corridor Definition Study work plan, including the schedule and budget for all tasks, to ensure that the objectives of ADOT and the TAC will be met. We will work with ADOT to identify the critical work plan tasks required for refinement. Specific work plan elements of focus will include, but not be limited to:

- Designing the public and stakeholder involvement process, including implementing activities and events from the start to the finish of the study schedule;
- Identifying the appropriate population and employment growth assumptions and scenarios to best understand future travel demand and land use development patterns for use in accurately testing and evaluating project options;
- Identifying the appropriate evaluation tools and methods to best assess the impacts of economic development, freight and trade (air cargo), and financial constraints, as well as the transportation and environmental impacts of each proposed future project option; and
- Implementing needs, deficiencies, and evaluation methods that are as consistent as possible with the MoveAZ planning process so ADOT can use this information as input in the preparation of the next state transportation plan.

Early in the study, we recommend conducting a facilitated discussion with the TAC and ADOT to build consensus among the participants about the study's objectives, corridor boundary definition, as well as to resolve any key technical and institutional issues that may impact the preparation and schedule of the study.

The CS team also will develop a quality control (QC) plan tailored to meet the specific needs of this study. By following the procedures in this plan, many problems will be avoided altogether, and others will be caught and rectified before they become serious. Adhering to the study's aggressive schedule requires this type of approach. Our QC planning process will include clearly defined management and team roles, structured milestone meetings and deliverables, status updates and monitoring, ongoing technical review, and a document control system similar to the one we developed for MoveAZ.

Presentation material will be drafted for ADOT and TAC review for the work plan refinement meetings. We will prepare similar material for each subsequent ADOT and TAC meetings to be held over the course of the study.

## Subtasks

- 1.1 Conduct a kickoff meeting with ADOT and the TAC to better understand their perspectives on critical issues facing the corridor, both technical and institutional, and to review the project work plan, schedule, and budget.
- 1.2 Refine the project work plan, schedule, and budget based on the comments from ADOT and the TAC.
- 1.3 Define the boundary for the Williams Gateway corridor through a facilitated discussion with a small set (10 to 20) of agency and business stakeholders located in the region. The CS team will work with the TAC to identify the stakeholders for this meeting using the extensive lists of stakeholders that we have developed in support of the MoveAZ plan,

the Queen Creek General Plan, and other studies conducted for Pinal County and the Williams Gateway Airport.

- 1.4 Prepare the study's QC plan to provide the CS team and ADOT with up-to-date tracking of technical work status, schedule, and budget adherence.
- 1.5 Design the public and stakeholder involvement plan to meet the needs of ADOT and the TAC for this study. This plan will be prepared at this early stage to ensure that active public and stakeholder involvement is underway from the start of the study and that the appropriate level of stakeholder input is obtained for use in the study's planning process.

### ***Products***

- Final work plan, schedule, and staff requirements (budget) for the study;
- QC and schedule adherence plan;
- Final public and stakeholder involvement plan; and
- Final corridor study area/boundary definition.

## **Task 2. Describe Existing and Future Conditions**

### ***Objective***

Document existing and future conditions, needs, and deficiencies and identify opportunities and issues for discussion with ADOT and at public involvement events.

### ***Approach***

The CS team will lay the technical foundation for the Study by using a solid basis of data and analytic techniques to understand existing and future conditions, needs, and deficiencies. Although several studies have been conducted that address or overlap the study area (e.g., SEMNPTS), we believe it is important to pull together information from these studies, identify and fill gaps in existing knowledge, and provide a fresh perspective on the specific issues surrounding the Williams Gateway Corridor.

Our approach described below will include assembling existing data and studies, developing growth and travel demand estimates, identifying base and future conditions, and describing future needs and deficiencies.

### **Assemble Data and Studies**

The CS team will gather and compile available data from previous studies, including SEMNPTS, the Pinal County Transportation Plan, the Apache Junction Small Area Transportation Study, the Williams Regional Planning Study, the Williams Reuse Plan and Update, and others. Members of the CS team have worked on nearly all of these previous planning efforts and are intimately familiar with the results of these studies. Data to be collected will include transportation network characteristics, accidents, levels of service by road and critical intersection, travel demand models and supporting data, traffic counts, freight and truck movements, socioeconomic data and land use patterns, and other information.

Data to support this task will be gathered from several sources. ADOT maintains substantial data on all public road segments in Arizona, including county and locally managed systems. The Highway Performance Monitoring System (HPMS) provides data that will be useful for this effort. Additionally, MAG and Pinal County have travel demand models that overlap in the northern region of Pinal County. Lima has worked extensively with the MAG model and developed the Pinal County model.

### **Develop Regional Growth and Travel Demand Estimates**

To support the development of a consistent analytical process for the three corridor definition studies (Williams Gateway, US 60, and Pinal Corridors), CS will develop regional estimates of population and employment growth and travel demand in the region. As agreed to by ADOT, these forecasts and demand estimates will be used to support all three Corridor Definition Studies (Williams Gateway, US 60, and Pinal County Corridors). The process described below builds off of our original proposal, but has been expanded to provide estimates for the entire region. Future planning for Northern Pinal County will depend on reliable estimates of travel in these corridors. As such, we will identify travel demand for the study area to assess both existing and future conditions, as well as to identify needs, deficiencies, and the potential project options for the corridor. To understand this demand, we will implement the process presented below.

***Identify Appropriate Regional Modeling Framework.*** CS will evaluate the model zone structure developed by MAG for the SEMNPTS and use it as a basis to organize these estimates. The model structure for this study covers part of the MAG region and a substantial part of Pinal County, including all areas with proposed roadways from the SEMNPTS. We will work with the consultant project managers from all three studies to determine if any of the zones will create issues for future analysis and

We will reconcile and then integrate the land use estimates with the population and employment growth estimates already prepared in this task. Major land uses in the area, including the Williams Gateway Airport, GM, which recently decided to sell more than one-third, or 1,800 acres, of its Desert Proving Grounds, and thousands of acres of state land (see Figure 3.1) will be reviewed and built into the corridor analysis. As necessary, we will meet with municipalities and other agencies to ensure that the modeling system to be used for the project contains the most updated information about the population and employment projections, as well as the existing and future arterial and highway network in the study area.

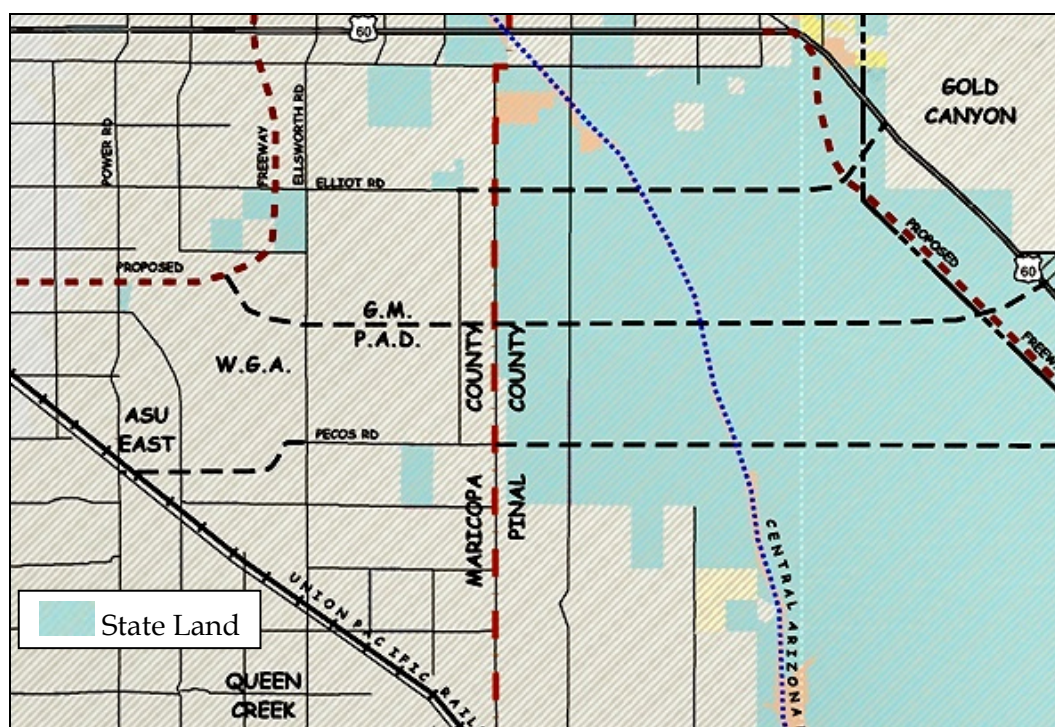
***Base and Future Regional Population and Employment Growth Scenarios.*** To support the development of a consistent analytical procedure for the three corridor definition studies (Williams Gateway, US 60, and Pinal County Corridors), CS will develop base and future population and employment forecasts for the region. These forecasts will be tied together with base travel demand estimates (see below) to provide a consistent basis for all three studies. The CS approach to developing these forecasts will be to reconcile forecasts from several sources, including:

- Arizona Department of Economic Security (ADES) population forecasts, last updated in 1997;
- Maricopa Association of Governments (MAG) population and employment forecasts developed for the MAG RTP and the SEMNPTS;

- Pinal County population and employment forecasts developed to support the Pinal County Transportation Plan and the supporting travel demand model;
- Population and employment forecasts from local municipalities who have developed their travel demand models to support planning studies (such as the Apache Junction SATS);
- Woods and Poole county employment projections;
- Development plans for municipalities (such as Queen Creek, Apache Junction, Mesa, and others) and Pinal County.

CS will work with each of the other project managers (for the US 60 and Pinal Corridors studies) to prepare a complete set of data and studies to support the development of regional estimates. CS will review a select number of general plans as a check on the population and employment projects generated for this task. These will include general plans for the towns of Apache Junction, Queen Creek, and Mesa, as well as plans for unincorporated areas generated by Pinal County and the Arizona Department of Land. These plans will be used to check the reasonableness of the forecasts, but will not be formally integrated. If necessary, we will meet with city officials in the region to resolve any substantial discrepancies between the general plans and population and employment forecasts.

**Figure 3.1 Existing Major Land Uses in Northern Pinal County**



Source: Superstition Area Land Trust

**Develop Regional Travel Demand Model.** The regional population and employment forecasts developed above will be fed into a regional travel demand model that will serve as one of the key inputs to the description of needs and deficiencies and the development and evaluation of alternatives in all three corridor studies. In our original proposal, Lima & Associates were

proposed to provide a modeling framework for the corridor study. For the expanded regional model, we believe they should provide a consistent modeling base for all three Corridor Definition Studies. This will include calibrating the model and providing a base year (no build) model scenario for the overall study region. We will work with Lima & Associates to provide the appropriate data to support this effort. The regional models, including modeling software, inputs, and outputs, developed by Lima will then be used by all three consultants for the Williams Gateway, US 60, and Pinal County Corridor Studies analysis of needs, deficiencies, and alternatives analysis.

***Forecast Demand For Travel in the Corridor.*** The CS team will supplement the regional modeling system with recently developed commodity flow and freight movements from our work with the ADOC and with recent traffic counts collected for various studies in the County. We propose to incorporate detailed truck and air cargo movements into the selected modeling process to better understand economic and trade activity in the corridor, and in particular, freight movements and economic activity associated with the Williams Gateway Airport.

The CS team will group traffic analysis zones from the model into logical subregions, using or building on MAG's municipal planning areas. These will include municipalities, such as Queen Creek, Apache Junction, Mesa, and other cities that lie within the study area, as well as major unincorporated areas and State land in Pinal County that either are currently growing rapidly or are planned for future growth. We will use the calibrated regional base year model and subsequent future forecast models developed above to generate traffic, truck, and multimodal travel data to support existing and future (no project) conditions analysis, and future needs and deficiencies analysis. Using base year and future year no project scenarios, we will generate "desire lines" that represent the major travel flows between these subregions and major destinations within Pinal and Maricopa Counties. This analysis will show current and future travel demand patterns in Pinal County, including the highest demand travel patterns. The future forecast year models also will be used as the basis for coding, evaluating, and testing future alternatives for the corridor.

***Estimate Demand for Other Modes.*** Although the Williams Gateway Corridor Definition Study is based upon a concept of a future highway connecting Loop 202, the Williams Gateway Airport, and U.S. 60, it is important to also consider the demand and need for alternate modes in this corridor. As part of MoveAZ, CS developed methods to estimate the demand and utilization of every major transportation mode, including rail (freight and passenger), transit (urban, rural, and intercity), air, and bicycle/pedestrian, in addition to automobiles and trucks. Using these methods, the CS team will generate estimates of the demand for each mode. These estimates have already been generated for Pinal County as part of MoveAZ. We will supplement this recent information with estimates of travel demand for these modes from both the MAG and Pinal County travel demand models as appropriate. This information will be further refined for the specific study area as defined by the TAC partnering events described in Tasks 1 and 3.

For air transport, we will use more detailed methods to estimate total enplanements of both passengers and freight at the Williams Gateway airport. These estimates will be based on our understanding of the Williams Gateway airport, as well as our national expertise in freight and air cargo forecasting. CS has participated in numerous analyses of freight and passenger forecasts at airports, including Baltimore-Washington, Los Angeles area airports, and others. The purpose of this task will be to understand potential scenarios for air cargo and passenger

development. CS also will use information from interviews with executives at Phoenix, Tucson, and Williams Gateway Airport that were conducted for the ADOC Transportation and Logistics Research project. These interviews will help identify key issues at Williams Gateway that could impact the development of the Williams Gateway Corridor.

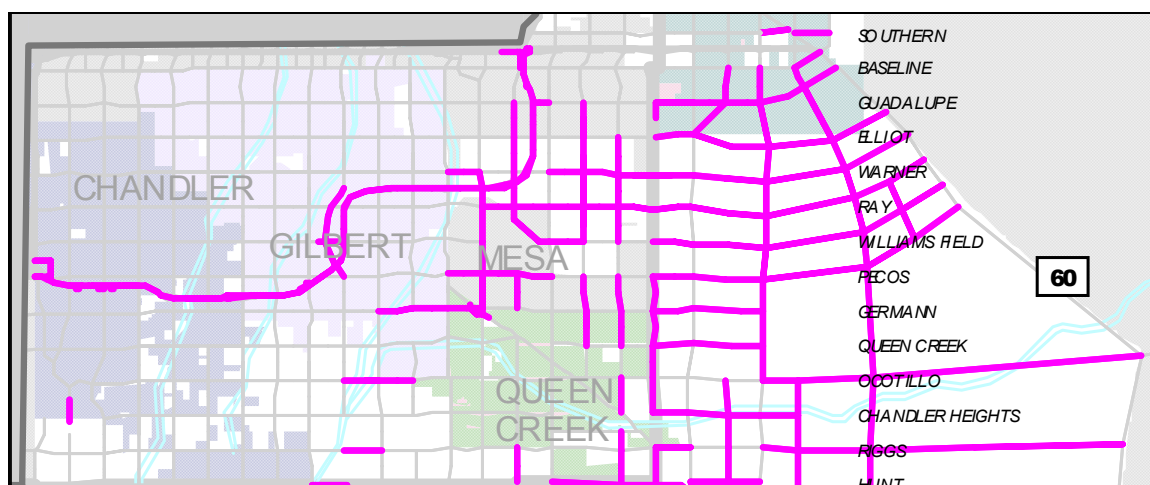
### Identify Existing and Future Conditions

Having identified population and employment growth and travel demand, CS will evaluate the existing and future conditions of the corridor. The identification of existing and future conditions, needs and deficiency analysis, and evaluation approach will all be built around the same key elements. This section describes how we will generate existing and future conditions for each of the elements presented below. Below, we describe a methodology for developing deficiencies for each of these elements. In Task 4 we describe an evaluation approach built around analyses of the same elements. The analyses below also were developed to be consistent with the performance-based planning framework developed for the MoveAZ plan.

**Transportation Networks.** The CS team will use the modeling system and associated growth estimates prepared above to assess the conditions for both existing and future no build (no project) conditions. The existing transportation network will consider current systems, while the future planned transportation network will consider existing plus committed future projects. Existing plus committed future project networks describe future conditions, including programmed and funded projects not yet constructed.

Several components of the existing and future planned transportation network are available from a combination of sources, including the MAG RTP, the SEMNPTS, the Pinal County Transportation Plan, the Apache Junction SATS, the Williams Gateway Reuse Plan, the MoveAZ Plan, and others. We will show the extent of the arterial street network; existing and planned state highway facilities (such as the completion of Loop 202 between U.S.-60 and I-10); existing use of the Williams Gateway airport; existing transit service in the study area; and infrastructure for cyclists and pedestrians, including trails. The future arterial network for the Williams Gateway Corridor area will expand significantly over the next 20 years (Figure 3.2).

**Figure 3.2 Planned Future Roadway Development in the Study Area**



Source: Southeast Maricopa Northern Pinal County Transportation Study.



Existing and proposed transit service can be identified from the MAG Regional Transportation Plan, High Capacity Transit study, and similar studies. Potential transit corridors, including light rail along Power Road and Chandler Boulevard, commuter rail along the UP southeast branch, and express BRT service along U.S. 60 and Loop 202, could impact the Williams Gateway Corridor study area. Airport activity will be identified from the Williams Reuse Plan, the Williams Regional Planning Study, and the work CS has conducted for ADOC. This work includes interviews with major airports, as well as shippers, freight forwarders and warehouse operators in the Phoenix region. These interviews provide an invaluable context for understanding potential freight and passenger development at Williams Gateway Airport. We will supplement these interviews with additional interviews as necessary to support this effort.

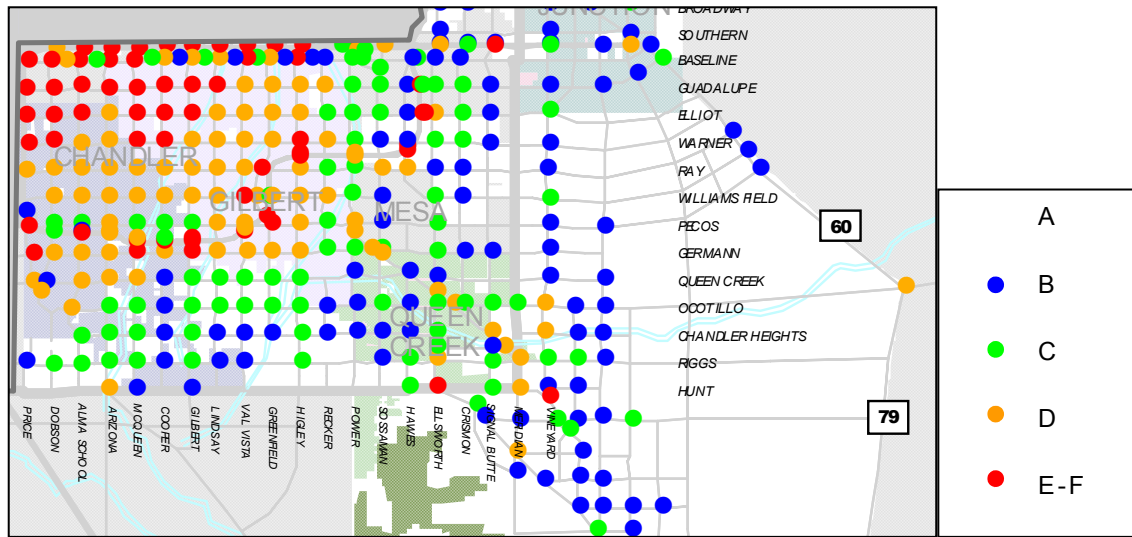
**Mobility and Reliability.** The Phoenix-Mesa metropolitan area is based on a strong, arterial grid system. Primary arterials are located at regular intervals with additional collectors serving local traffic between these arterials. We will work with ADOT and the TAC to existing and future conditions for mobility and reliability of the local, regional, and state transportation system in the study area. Examples of a mobility analysis could include: travel time isochrones that graphically illustrate bands of travel time from key points in the study area (such as Williams Gateway Airport), vehicle/capacity ratios for major roadways, and length of delay experienced per trip within the study area.

To better understand reliability of the transportation system, we recommend selecting up to 15 critical intersections and 20 roadway locations to conduct existing conditions analysis but will work with ADOT and the TAC to identify the appropriate number of each. The SEMNPTS study has developed base and future intersection LOS levels for many of the key intersections in the study area, providing a guide to help select these locations (Figure 3.3). We will work with ADOT and the TAC to identify the appropriate techniques for both roadways and intersection level of service analysis.

**Accessibility.** The CS team will identify the presence of Title VI populations within the study area. These population are often defined by race/ethnicity, age, mobility disability, income, and other related variables. Using data from the U.S. Census and other demographic data collected by state, regional, and local agencies, the CS team will identify the spatial location of these populations relative to the study area. In addition, the CS team will identify access to employment for these populations.

**Safety.** Safety statistics are collected by several sources, and ADOT maintains a database of all reported traffic crashes, including injuries, fatalities, and property-damage-only (PDO) crashes. Future crash rates will be generated using the Highway Economic Requirements System (HERS-ST). With careful tailoring, HERS-ST can be used to evaluate both state highways and primary arterials and local roads. Estimates of future crash rates will be calibrated to actual crash data collected by ADOT, regional, and local jurisdictions.



**Figure 3.3 Future LOS of Major Intersections in the Study Area**

Source: Southeast Maricopa/Northern Pinal County Transportation Study.

**Resource Conservation.** The CS team will identify the natural and cultural characteristics of the study area using available information from the Arizona State Historic Preservation Office, Arizona Department of Game and Fish, Arizona State Land Department, Arizona Department of Environmental Quality, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, and affected jurisdictions' general plans. These issues include topography and drainage, wildlife habitats, threatened and endangered species, cultural and historic features, wetlands, Title VI (environmental justice) protected populations, potential hazardous material locations, noise and air quality, Section 4(f) properties, and others.

The CS team also will identify potential air quality issues within the study area. Emissions data are available from various sources, including ADOT and MAG for Pinal County. Future emissions will be generated using tools, such as IDAS, that assess all types of highway operational configurations. The CS team is very comfortable in applying IDAS, which were developed by CS and used by CS to support the performance evaluations of the MoveAZ Plan. Freight and commodity flow movements that we propose to build into the modeling system will also be a critical component of the safety and air quality analysis. This information will provide ADOT with a better understanding of the safety and environmental concerns of heavy duty trucks moving on the arterial transportation network within the study area.

**Economic Vitality.** One of the goals of this study will be to identify the economic impacts of potential transportation facilities in the Williams Gateway Corridor. The employment and land use data gathered above will be used to identify total employment in the study area, by industrial sector and major employers. We also will identify available land for industrial and commercial development.

### Identify Future Needs and Deficiencies

The culmination of Task 2 will be a framework to analyze future transportation needs and deficiencies in the Williams Gateway Corridor. This framework will be directly linked to the

evaluation framework designed to test alternatives in Task 4 and the outcomes of the public and stakeholder involvement process implemented in Task 3.

Our proposed framework will include analytical tools developed to perform the existing and future conditions related to mobility, accessibility, reliability, safety, and resource conservation. We recommend using HERS-ST as the foundation for identifying transportation needs and deficiencies. We will supplement HERS-ST procedures with outputs from the travel demand models and other tools such as IDAS. We will work with ADOT and the TAC to establish criteria that identify needs and deficiencies for each of these performance measures. For example, we will develop criteria that define normal or average levels of accidents (injuries, fatalities, PDO), travel times (mobility), emissions, and other measures to appropriately define deficiencies for the corridor.

Once these criteria are approved, we will use the analytical tools such as HERS-ST, IDAS, roadway and intersection capacity software, and the travel modeling system to fill out the framework to understand the needs and deficiencies on the future transportation system. This process will be used to develop a purpose and need statement for the corridor, including a description of deficiencies. We believe that this framework should also be closely tied to the performance-based planning work conducted as part of the MoveAZ Plan. Table 3.1 provides an overview of framework for evaluating corridor conditions, deficiencies, and needs consistent with the MoveAZ plan.

### **Subtasks**

- 2.1 Assemble and compile data and studies to form the foundation of population, employment, and land use growth, travel demand by all modes in the corridor, and transportation conditions within the corridor for base and future years.
- 2.2 Develop base and future demand to support existing and future conditions, needs, and deficiencies using the approved and calibrated travel modeling system.
- 2.3 Identify existing and future transportation conditions by generating performance information related to traffic, vehicle miles traveled (VMT), travel time, multimodal, and other associated performance statistics to understand transportation network LOS, mobility, accessibility, safety, air quality, and natural and cultural environment concerns (including environmental justice issues).
- 2.4 Identify future needs and deficiencies and prepare a purpose and need statement on the transportation network in the area using the analysis framework, tools, and criteria approved by ADOT and the TAC.

**Table 3.1 Potential Deficiency Analysis Framework**

<b>MoveAZ Planning Factor</b>	<b>Measures of Conditions and Deficiencies</b>	<b>Deficiency Thresholds</b>	<b>Evaluation Tools and Data Sources</b>
Mobility	Delay per trip, congestion on major arterials	LOS E or F	HERS-ST, MoveAZ Decision Support Tool,
Reliability	Intersections below critical LOS threshold,	LOS E or F	MAG and Pinal County models, IDAS
Economic Vitality	Freight delay, Existing job base, jobs-housing imbalance	<i>TBD</i>	County Business Patterns, freight analysis
Safety	Predicted crash rates, Anticipated increases injuries and fatalities	Crashes 10% above average	HERS-ST
Accessibility	Lack of access to jobs for Title VI populations	10% below average	GIS Spatial Analysis
Resource Conservation	Emissions rates	Mobile source violations	IDAS, Mobile 6

### *Products*

- **Working Paper 1:** Inventory and reporting of existing and future no project conditions, future needs and deficiencies analysis, and purpose and need for the corridor.
- Supporting databases, technical memoranda, documents, and other material in hard copy and electronic format.

## **Task 3. Conduct Public and Stakeholder Involvement**

### *Objective*

Establish and conduct a public and stakeholder involvement plan that maximizes the participation of local residents, elected officials, businesses, and agency stakeholders and that educates, informs, and solicits feedback from participants for use in the planning process.

### *Approach*

In the Request for Proposal (RFP), ADOT identified two public involvement phases for the Williams Gateway Corridor Definition Study. Through our experience with similar studies and given the sensitive nature of developing entirely new facilities in Arizona, the CS team recommends implementing a public and stakeholder involvement plan that will ensure participation by key stakeholders, elected officials, and the general public. Our goal will be to provide meaningful stakeholder involvement that is directly connected to the technical tasks and to the final recommended project options to be evaluated and prepared in Tasks 4 and 5.

We recommend designing and implementing the public and stakeholder involvement activities and events starting in Task 2 through the completion of the Final Report in Task 5 to ensure the level of input and participation that is expected by ADOT. We will design this process in Task 1, including detailed discussions with and review by ADOT and the TAC. We will work

with ADOT and the TAC to define the specific types and timing of partnering events for integration with the technical elements of the study.

We recommend implementing several partnering events, including:

- Providing an opportunity to the TAC members in the initial session to identify key issues, to suggest individuals or organizations for inclusion in the focus groups below, and to help define a corridor boundary for the study.
- Conducting a single set of four focus groups to understand issues, needs, and concerns of specific interest groups in the study area. These interests may include Federal and state land agencies (AG&F, BLM), other state interests (ADOC and Arizona State University East), Williams Gateway Airport Authority, General Motors and other businesses, communities, such as the Town of Queen Creek, transit, and environmental interests. The focus groups will be held early in the process using individuals and organizations identified by Partners for Strategic Action (PSA) in coordination with the ADOT project manager and the TAC. The focus groups will be held over two days and will be designed to maximize the participation of all groups. Focus groups will be invited to participate in all future events for the project. The CS team will work with project managers for the other two corridor studies to determine if these groups need to be coordinated across the three studies, especially the State Land Department.
- Conducting and facilitating public corridor issues forums in two locations along the corridor. At these events, we will present the results from the first working paper (a review of existing and future conditions, travel demand in the corridor, and needs and deficiencies) and the initial round of focus groups to the general public, as well as stakeholders. These forums also will be used to help identify corridor issues and potential transportation solutions and strategies for evaluation in Task 4.
- Conducting and facilitating public transportation options and alternatives workshops, also to be held in two locations along the corridor. These workshops will be used to present the results of the second working paper (identification and evaluation of corridor alternatives) to the general public, as well as stakeholders, and to discuss and refine potential corridor options.

The CS team will work with ADOT and the TAC to design the public and stakeholder involvement partnering events and schedule, clarify our needs to help implement the events, and integrate this process with the key technical tasks of the study. Though we will implement this process in Task 3, the public and stakeholder involvement process and specific partnering events will be integrated with all study tasks.

Though we have a list of over 3,000 stakeholders across the state, we will work with ADOT and the TAC to refine the stakeholder lists and to mail the associated material to the participants attending the events. Our team will prepare and distribute the appropriate media and press announcements to promote each partnering event. We also will work with ADOT to prepare at least two corridor newsletters to help distribute information about the planning, evaluation, and partnering process of the study.

The CS team also will prepare web ready versions of the newsletters, design plan, summary of partnering event process and results, press releases, and other associated material. CS will provide this material to ADOT to be included on the ADOT TPD website.

### ***Subtasks***

- 3.1 To support Task 2, conduct four stakeholder focus groups to understand specific issues, needs, concerns, and visions of specific interest groups (economics, freight, business, university, transit, among others) in the corridor.
- 3.2 To support Task 2, conduct two corridor public issues forums to present transportation conditions analysis, to identify the specific corridor issues, and to identify potential transportation solutions and strategies for evaluation.
- 3.3 To support Task 4, conduct two public transportation options and alternatives workshops to present, discuss, and refine the potential corridor project options.
- 3.4 Prepare at least two corridor study newsletters using a format and distribution process approved by ADOT. Newsletters will be user friendly, graphically oriented, and will convey summary information to the public and stakeholders.
- 3.5 Develop a material for the ADOT web site to distribute and communicate both the schedule of partnering events and material (press releases, event notices, and newsletters) and the study documents and technical analysis for additional public and stakeholder access.
- 3.6 Prepare the associated media and press material for each partnering event.

### ***Products***

- Draft and Final Summary Reports for public and stakeholder involvement events.
- Supporting display boards, handouts, mailing lists, press releases, and technical memorandum summarizing the process, inputs, and results of each round of the public and stakeholder involvement processes.
- Final Newsletters to support the various tasks of the public and stakeholder involvement process, as well as technical tasks conducted for the study.

## **Task 4. Identify and Evaluate Transportation Options and Alternatives**

### ***Objective***

Develop a structured evaluation framework and related criteria linked to the needs and deficiency analysis and public involvement process to test the viability of proposed transportation alternative projects and options for the Williams Gateway Corridor.

### ***Approach***

The CS team will provide ADOT with a framework to evaluate and test potential project options for the Williams Gateway Corridor. We believe that it is vital that this process be consistent with the recently completed MoveAZ Plan, as well as building upon studies completed in or overlapping with the study area. As we suggested in Task 2, our overall approach is designed to be consistent from start to finish of the study. Our approach will enable ADOT to

easily use the preferred project results from this study as input into the MoveAZ performance-based evaluation process. The MoveAZ process uses performance factors and measures connected to specific goals and objectives identified through an intensive planning and public involvement process. The CS team approach will build on this work and ensure consistency with the direction of performance-based planning that ADOT has adopted. The identification and evaluation of corridor options will be developed through the analytical process shown below.

### Identify Corridor Options

Potential corridor options will be developed from several sources, including the deficiency analysis, public involvement sessions, previous studies, and others. As recommended in Task 2, tools such as HERS-ST can be used to identify potential projects to alleviate deficiencies on the transportation system. The transportation options and alternatives workshops will provide an opportunity for the public and stakeholders to engage planning concepts and potential options identified by ADOT and the consultant team and to suggest key concepts of their own.

Finally, working with ADOT and the TAC, the CS team will evaluate options identified in previous studies, such as the SEMNPTS. This study provided two broad options – freeway and arterial development in this corridor. We will develop a more detailed assessment of the available options that will include multimodal as well as freight infrastructure improvements.

The CS team will identify options for the corridor along several dimensions, including:

- **Facility type**, including arterial, expressway, parkway, or freeway options, numbers of lanes, high occupancy or toll vehicle lanes, right-of-way preservation, and others.
- **Potential alignments** will depend upon engineering determination of possible routing, available land, and other factors.
- **Supportive elements**, including potential operational or ITS elements for either a new facility or the existing arterial network; integration with potential transit service, such as those identified in the MAG High Capacity Transit Study, and others.

The CS team expects that segments of the corridor may be developed at different times (project construction phasing) and with different, but complimentary options. Estimates from SEMNPTS show much greater initial use of a facility between Loop 202 and the Williams Gateway Airport than between the airport and U.S. 60. We will identify potential future facilities by segment of the new corridor, allowing a combination of short, medium, and long-term options for corridor development in the future.

### Develop Evaluation Framework

As described in Task 2, we believe that the evaluation framework should be linked closely to existing work completed for MoveAZ. We will use a combination of MoveAZ performance measures and complimentary measures relevant to the more detailed scope of a corridor definition study. Table 3.2 lists potential measures for evaluation of corridor options. Final measures will be selected through consultation with ADOT and the TAC.

**Table 3.2 Potential Corridor Evaluation Measures**

<b>MoveAZ Planning Factor</b>	<b>Performance Measures</b>	<b>Evaluation Tools and Data Sources</b>
Mobility	Reduction in delay, improvement in V/C Ratio	HERS-ST, MoveAZ Decision Support Tool
Reliability	Improvement in intersection LOS	MAG and Pinal County models, IDAS
Economic Vitality	Jobs created in study area, improvement in freight access	REMI, Economic Analysis
Safety	Change in crash rate, facility design specifications	HERS-ST, engineering analysis
Accessibility	Jobs created in areas with concentrations of Title VI populations	GIS Spatial Analysis
Resource Conservation	Reduced emissions, fatal flaws, land use impacts, cost effectiveness	Engineering Analysis, IDAS, Mobile 6

### Screen and Evaluate Corridor Options

Performance and evaluation measures will be generated using analytical tools (HERS-ST, IDAS, others) to thoroughly analyze traffic, levels of service, safety, air quality, land use, and economic impacts of each project option. The CS team will perform engineering and environmental fatal flaw analyses for each option and identify potential environmental justice considerations. We will apply this evaluation framework to initially screen the project options identified earlier in this task and to identify the preferred project option for the corridor.

**Mobility and Reliability.** The CS team will analyze the potential transportation impacts that result for the corridors. It will use data from existing travel demand models (MAG and Pinal County), MoveAZ, HPMS, and HERS-ST to understand how traffic patterns would be altered by adding a new highway or similar facility in the Williams Gateway Corridor. We also will use the approved capacity software identified in Task 2 to evaluate the roadway and intersection levels of service. This analysis will produce key measures of mobility and reliability such as delay, intersection LOS, and other related performance measures.

**Accessibility.** The CS team will identify expected improvements to access the state transportation system and measure the impact of the system on Title VI populations. These issues could include analysis of changes in heavy truck trips on arterials, improved access to employment, and other similar analyses.

**Economic Vitality.** The CS team will analyze the economic benefits of each of the proposed scenarios, including potential impacts of freight and goods movement. Improved access to the Williams Gateway airport and available land for development may help attract new businesses to the study area and can also provide accessibility benefits for residents of the study area. Pivoting off of work conducted for several states and regions, the CS team will develop a model that uses data from existing travel demand models and other tools to identify the potential employment gains and economic impacts of each alternative. This analysis will be especially relevant to test alternative growth scenarios for the Williams Gateway Airport and other freight and economic generators in the study area.



**Safety.** The CS team will evaluate the impacts of new facilities on the safety of the transportation system. We will use HERS-ST to identify expected changes to crash rates, injuries, and fatalities in the study area for both state and local roads.

**Resource Conservation.** This analysis will focus on air quality and related performance measures, as well as a fatal flaw engineering and environmental analysis. Potential environmental, natural and cultural preservation, land acquisition and constraints, and engineering fatal flaws will be conducted to support this analysis. We recommend conducting a qualitative approach to understanding these fatal flaws as a way to screen and evaluate the project options as they are being tested. For example, we will account for the potential constraints of acquiring right-of-way for a proposed corridor alignment if the costs are exorbitant. The same analysis will be conducted for environmental, engineering, and other land acquisition impediments.

In addition to evaluating individual corridor options, the CS team also will identify and test packages of options and concepts analyzed for this study. This could include packages of operational and capacity expansion, various capacity expansion and right-of-way preservation options along the length of the corridor, and others. The same evaluations as conducted for individual options will be evaluated for the packages. We recommend using GIS to understand these issues having conducted similar work for corridor evaluations most recently in Oakland, Atlanta, and Chicago.

### **Recommend Preferred Options**

The CS team will work with ADOT and the TAC to identify a preferred project option using this evaluation framework. The evaluation will produce a matrix of corridor options by performance measures and factors identified in the evaluation approach. The preferred option will likely combine aspects of several alternatives that address different issues (mobility, safety, etc.) and timeframes. For example, by 2030, there may be substantial demand for a new facility linking the Williams Gateway Airport to the regional freeway system. At that time, however, right-of-way preservation may be the best strategy for the remainder of the corridor. A final option might combine these or other strategies and projects into a final preferred package.

### **Determine Corridor Relationship to State and Regional Needs**

The Williams Gateway Corridor Definition Study will be the first step in identifying a future corridor options for the study area. Several existing studies such as the MAG Regional Transportation Plan, the MoveAZ plan, and other local and regional plans and studies identify transportation facilities that may overlap this area. Throughout the process – in defining the system, describing deficiencies, and identifying and evaluating options – the CS team will develop an understanding of how proposed new facilities will interact with the improvements proposed in these plans. Members of the CS team have worked on many parts of these previous efforts and are well informed about existing plans for the corridor area.

This study will help ADOT determine the need for and feasibility of a new Williams Gateway Corridor, including recommending the type of facility to study further with detailed engineering and environmental analysis for purposes of programming and construction. Through this task, the CS team will help to identify future studies that may need to be conducted by ADOT and other agencies to support the development of the preferred alternative. The preferred option for the corridor should also be considered for inclusion in Arizona's performance based planning process.

### **Subtasks**

- 4.1 Identify a large list of potential project options and concepts for the corridor using strategy definitions from other recent studies conducted in the study area and new project options and solutions that may not have been considered in these previous studies.
- 4.2 Develop an evaluation framework to screen and then test the effectiveness of each proposed project option identified for testing in this corridor. This process will be consistent with MoveAZ planning processes and consider a variety of analysis tools (HERS-ST, Regional Travel Model – see Task 2) and performance measures to be approved by ADOT.
- 4.3 Screen and evaluate the project options using the evaluation framework established previously in Subtask 4.2. Fatal flaw analysis will be performed as part of this task to identify a short list of projects for recommendation.
- 4.4 Recommend the preferred project option for the corridor, including the planning level alignment, components (operational, highway, multimodal), and systems (HOV, transit preferences). Our recommendations also will identify future analysis needs for detailed engineering and environmental analysis for the preferred project option.
- 4.5 Determine corridor relationship to state and regional needs for use in assessing the preferred project option within the context of state planning, performance evaluation and prioritization, and programming.

### **Products**

- **Working Paper 2:** Develop evaluation criteria, identify options, and define the future facilities and corridors; and
- Supporting databases, technical memoranda, documents, and other material in hard copy and electronic format.

## **Task 5. Prepare Draft and Final Report**

### **Objective**

Prepare the Draft and Final Reports that synthesizes the technical analysis, partnering events, products, and recommended transportation project options generated from the previous tasks.

### **Approach**

The CS team will prepare the Draft Report by integrating the results of Working Papers 1 and 2 and the summary reports for all of the partnering events for the public and stakeholder involvement process. These outputs will form the core of the Draft Report and include detailed information about existing and future conditions; public and stakeholder input on issues and project options; recommended preferred options and alignments; recommended future planning, engineering, and environmental analysis needs; and an assessment of associated corridor relationships to both state and regional needs. An Executive Summary and presentation material that further distills the information contained in the Draft Report also will be prepared for the public, stakeholders, agency staff, and the State Transportation Board.

Based on our experience with the MoveAZ Plan and other similar studies across Arizona and the U.S., we will prepare the Draft Report early enough in the schedule (by the end of September 2005) to allow for at least three months of review and comment by ADOT and the TAC. This schedule will allow ample opportunity for ADOT and the TAC to provide thorough and thoughtful comments on the Draft Report for finalization. We will work with ADOT and the TAC to incorporate the appropriate level of comments generated in this review and comment period to prepare the Final Report and associated Final Executive Summary. Based on approvals from ADOT and the TAC, we anticipate that the Final Report will be prepared by the end of November 2005 to allow time for ADOT to present the findings to the State Transportation Board. We will also provide ADOT with a Board presentation that represents the study findings, recommendations, and future transportation analysis needs.

The CS team will prepare PDF and electronic versions of the Draft and Final Reports, as well as all supporting working papers, memoranda, and information for transfer to ADOT. The Final Report and applicable technical memoranda and material also will be posted on the web site.

### ***Subtasks***

- 5.1 Work with ADOT and the TAC to determine and finalize the format of the Draft and Final Reports and Executive Summary.
- 5.2 Prepare and submit both the Draft Report and Draft Executive Summary to ADOT and the TAC for their review and comment by the end of September 2005.
- 5.3 Upon receipt of ADOT's and the TAC's review and comment, the CS team will prepare the Final Report before the end of November 2005.
- 5.4 Prepare Draft and Final Report presentation material for ADOT to present the study's findings and recommendations to the State Transportation Board, and in particular, to obtain Board approval of the study and its potential future planning, engineering, and environmental steps.

### ***Products***

- Prepare 40 copies of a Draft Report and Executive Summary for ADOT and the TAC;
- Prepare 40 copies of the Final Report and Executive Summary for ADOT and the TAC;
- Provide ADOT with a reproducible, camera ready copy of the Final Report and Executive Summary on 50 Compact Disks (CDs);
- Provide "web-ready" versions (in PDF format) of each Final document by task; and
- Board presentation material for both the Draft and Final Reports.

## **3.3 Presentation of Anticipated Products**

The principal products prepared for the Williams Gateway Corridor Definition Study during the planning process are presented in a "Products" section for each task shown in Section 3.2, Project Work Plan. Draft technical memoranda, working papers, documents, datasets, and information will be prepared in electronic format and black and white for ease of copying.

Final documents for the study will be prepared using color specifications provided by ADOT and the TAC. The anticipated products are summarized by task below.

***Task 1. Refine Work Plan and Corridor Boundary Definition***

- Final work plan, schedule, and staff requirements (budget) for the study;
- Project management plan including TAC meetings schedule, QA/QC, and plan for accomplishing project by November 2005;
- Final public and stakeholder involvement plan; and
- Final corridor study area/boundary definition.

***Task 2. Evaluate Existing and Future Conditions***

- Working Paper 1: Inventory and reporting of existing and future no project conditions, future needs and deficiencies analysis, and purpose and need for the corridor.
- Supporting databases, technical memoranda, documents, and other material in hard copy and electronic format.

***Task 3. Conduct Public and Stakeholder Involvement***

- Draft and Final Summary Reports for the each public and stakeholder involvement event;
- Supporting display boards, handouts, mailing lists, press releases, and technical memoranda summarizing the process, inputs, and results of each round of the public and stakeholder involvement processes; and
- Final Newsletters to support the various tasks of the public and stakeholder involvement process, as well as technical tasks conducted for the study.

***Task 4. Identify and Evaluate Transportation Options and Alternatives***

- Working Paper 2: Summary of Evaluation Criteria, and Future Options, Facilities, and Recommended Corridors; and
- Supporting databases, technical memoranda, documents, and other material in hard copy and electronic format.

***Task 5. Prepare Draft and Final Report***

- Prepare 40 copies of a Draft Report and Executive Summary for ADOT and the TAC;
- Prepare 40 copies of the Final Report and Executive Summary for ADOT and the TAC;
- Provide ADOT with a reproducible, camera ready copy of the Final Report and Executive Summary on 50 Compact Disks (CDs); and
- Provide “web-ready” versions (in PDF format) of each Final document by task.

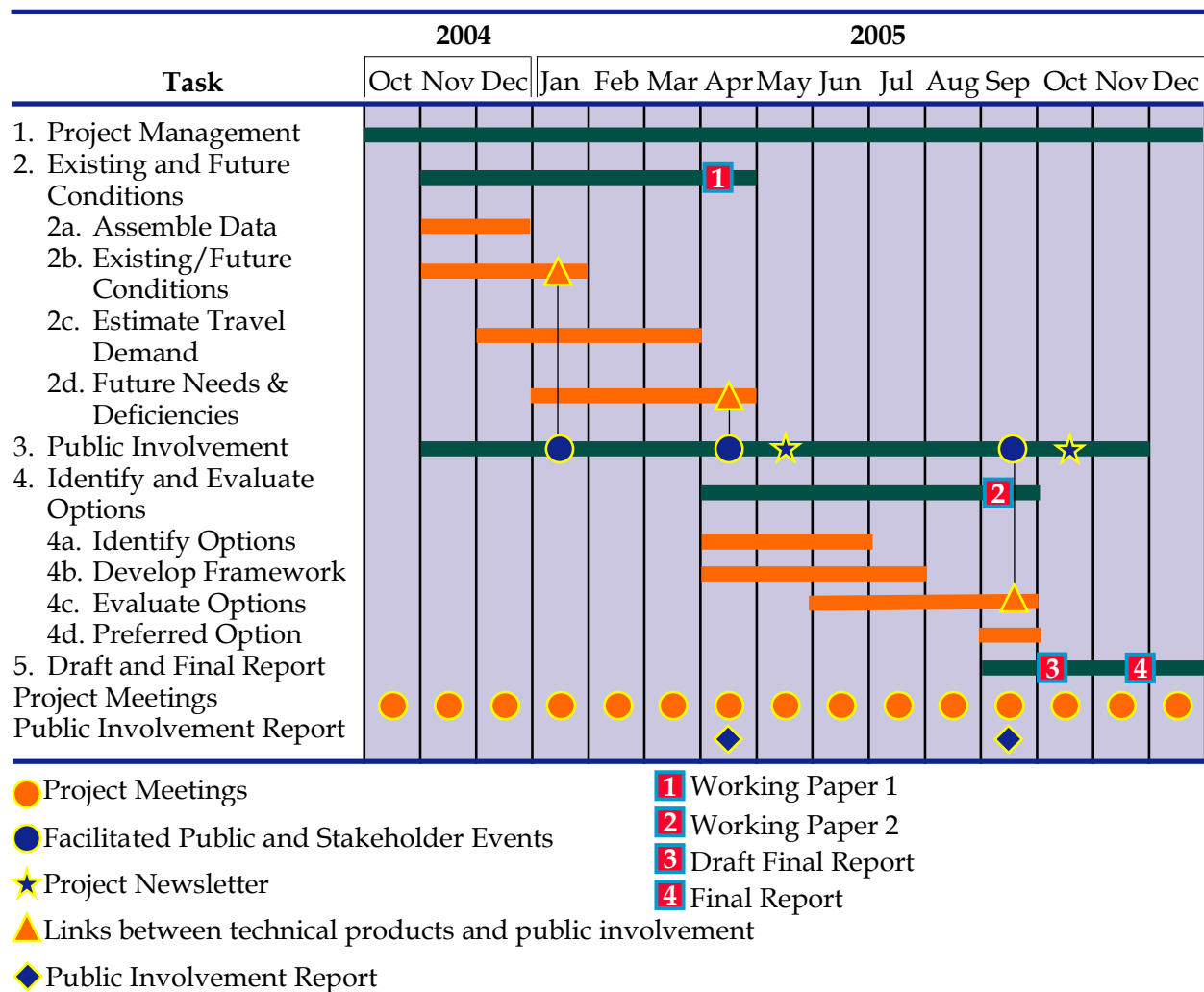
All documents will be prepared in Microsoft Word and the Microsoft Office Suite of software tools. Graphics will be prepared using Microsoft PowerPoint, Word, and Excel, compatible GIS

packages currently used by ADOT, including ArcView and other software. PDF versions of each final document will be provided on the ADOT web site.

### 3.4 Work Time Schedule and Hours

We propose an overall schedule of 14 months to complete the Final Report by the end of November 2005. The CS team will prepare the Draft Report within 11 months by the end of August 2005. After the Draft Plan is prepared, an additional three months will be required to complete the Final Report, taking into account appropriate stakeholder, TAC, and ADOT review time and feedback. Figure 3.4 shows the proposed schedule for the Williams Gateway Corridor Definition Study. The detailed schedule of meetings, events, and other activities for Public and Stakeholder Involvement will be refined during Task 1.

**Figure 3.4 Project Schedule**



### **3.5 Progress Reporting Procedures**

We will manage our team closely to ensure that the final deliverables and products meet ADOT's and the TAC's objectives for the study. We will ensure consistency with the highest standard of quality that CS seeks for all work, while developing task deliverables on time and within budget. To this end, we will develop a progress reporting procedure – similar to those we have implemented for projects with ADOT such as the MoveAZ Plan – that meets the needs of our team, ADOT, and the TAC.

Our progress reports will be structured using both on-line and hard copy memorandum format to be submitted to the ADOT Project Manager and ADOT procurement as appropriate. The progress reports will be submitted monthly on a schedule (e.g., first week of every month) to be determined by ADOT during project negotiations. Progress reports will include the monthly and cumulative status of the work conducted by task and CS team member. We will summarize the work, including task products (working papers, technical memos, and reports), conducted during the monthly period being invoiced, as well as identify the work proposed for the next month in each report. We also will provide ADOT with a summary of the percent complete of the study schedule and costs incurred in each monthly report.

### **3.6 Cooperative Features**

The CS team anticipates that significant communication and cooperation will be required between ADOT staff and the TAC members to successfully implement the technical and public and stakeholder involvement tasks of the study. CS will work with our team members – DMJM, Lima, and PSA – all located in the Phoenix metropolitan area, to establish a local base of operations to enhance and facilitate coordination of team members, ADOT, and the TAC.

At the proposal stage of this process, the CS team has not identified any specific cooperative features with organizations outside of ADOT and the TAC that need to be initiated to accomplish our proposed Work Plan. However, as our Work Plan indicates, we have proposed to coordinate with ADOT and members agencies of the TAC such as MAG, CAAG, and Pinal County, to identify the general outside organization cooperative features required to conduct various study tasks. These general requirements will include working with the CS team to accomplish the following:

- Identify the key local and regional contacts required to establish meeting locations for all of the events of the public and stakeholder involvement plan;
- Identify the key media contacts as appropriate in support of the meetings and events of the public and stakeholder involvement plan;
- Identify the appropriate representatives of local Chambers of Commerce, Native American Reservations, Businesses, City and Town agencies, and other stakeholder representatives for input into the public and stakeholder involvement plan and planning process; and

- Consult with MAG and Pinal County on specific travel demand data and procedures to ensure consistency with regional modeling outputs as we evaluate future transportation options in the Williams Gateway study area.

As the above needs are negotiated and are potentially required to support the study, the CS team will establish the appropriate protocol, process, and commitment following ADOT direction necessary to obtain information, assistance, and data from these outside organizations. We have provided the letters of commitment from our subconsultants – DMJM, Lima, and PSA – in the appendix of this proposal.